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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,263	11/21/2003	Edward Paul Carlin	9435	2795

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EXAMINER

CHAPMAN, GINGER T

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/719,263	<b>Applicant(s)</b> CARLIN, EDWARD PAUL	
	<b>Examiner</b> Ginger T. Chapman	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wada (EP 1064901 A2).

**Claim 1:** As seen in Figures 2, 3 and 6, Wada discloses a tampon (1) for feminine hygiene comprising an insertion end (fig. 2), a withdrawal end (fig. 2), a center region (fig. 2), a longitudinal axis (fig. 2), and an outer surface (page 2, line 43); said tampon being composed of compressed fibrous material (page 4, line 3); wherein said outer surface of said tampon comprises a plurality of recessed portions (figs. 3 and 6: (3)); each of said recessed portions comprising a length dimension and a width dimension (figs. 3 and 6); wherein said width dimension varies as measured along said length dimension (page 4, lines 24-27).

**Claim 7:** Wada discloses the recessed portions are evenly spaced (figs. 3 and 6).

**Claim 8:** Wada discloses the fibrous material of the tampon has an essentially uniform density over a cross-section of the tampon (page 6, lines 6-12: fig. 6).

**Claim 9:** Wada discloses the fibrous material of said tampon has varying density over a cross-section of the tampon (page 3, lines 4-5; page 5, lines 3-4).

**Claim 10:** Wada discloses wherein the tampon further comprises a core which is highly compressed (page 4, line 55 and lines 12-14).

**Claim 11:** Wada discloses wherein the withdrawal end further comprises a withdrawal member (fig. 2 (5); page 5, line 8).

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada in view of Schoelling (2001/0014348).

**Claim 2:** Wada discloses the tampon having a plurality of recessed portions. Wada does not disclose wherein the largest width dimension of the recessed portions is located in the insertion end. Schoelling, at page 1, [0003], expresses the desire for a tampon having controllable absorbency and controllable expandability based upon its structure without additional manufacturing expenses and costs.

Schoelling teaches that recessed portions in the surface of the tampon increase surface area available for fluid imbibition thus improving absorbency and additionally reducing bypass leakage as the tampon swells and blocks the vaginal canal. Schoelling further teaches that the choice of size and position of the holes provides for diversification of the absorption velocity of the fluid and additionally for absorption capacity (p. 2, [0020], ll. 6-8) and differential expansion of the tampon (p1, [0014], ll. 9-12) and thus discloses the desirability of such.

In particular, Schoelling teaches the largest width dimension of the recessed portions located in the insertion end (p.2, [0022] ll. 8-12). Schoelling teaches that the benefit of having the largest width dimension of the recessed portions in the insertion end is that the expansion of the withdrawal end is restricted so that when the tampon is withdrawn from the body cavity the diameter of the withdrawal end is reduced thereby facilitating ease of withdrawal for the user while maintaining blocking the vaginal canal by expanding at the insertion end for protection

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against bypass leakage. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the recessed portions of Wada having largest width dimension located in the insertion end in order to provide a more comfortable tampon with reduced bypass leakage.

**Claim 3:** Wada discloses the tampon having a plurality of recessed portions. Wada does not disclose wherein the largest width dimension of the recessed portions is located in the withdrawal end. Schoelling, at page 1, [0017], ll. 8-10, expresses the desire for optimal diversification of the absorption velocity and capacity over the length of the tampon. As seen in Figure 1, Schoelling teaches the recessed portions wherein the largest width dimension is located in the withdrawal end (p.1, [0017]). Schoelling teaches that the benefit of having the largest width dimension located in the withdrawal end is that fluid applied to the tampon is led in the direction of the withdrawal end [0018] thereby enhancing absorbency in the longitudinal direction and increasing absorption velocity due to the increase in surface area toward the withdrawal end while still preventing bypass leakage while also maintaining blocking the vaginal canal for protection against bypass leakage at the withdrawal end. In view of this known teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the recessed portions of Wada having largest width dimension located in the withdrawal end in order to provide a tampon that enhances the full utilization of the absorbent material of the tampon thus providing leakage prevention and bypass prevention and promoting economic efficiency for the user and the desirability of such by Schoelling.

**Claim 4:** Wada discloses the tampon having a plurality of recessed portions. Wada does not disclose wherein the smallest width dimension is located in said center region. Schoelling, at [0023], ll. 7-8, teaches that the number and size of the perforations lead to a different shape of the tampon when expanded such that the introduction and withdrawal of the tampon into and from the vaginal cavity can be facilitated. Schoelling further teaches at [0026] that combining both modifications, i.e., larger width dimensions located at both the insertion end and at the withdrawal end combine the benefits of both modifications (see claims 2 and 3, *supra*) in one tampon which expands into a serpentine shape resulting in a tampon enhancing the full utilization of the absorbent material in the longitudinal direction thereby providing leakage protection and promoting economic efficiency (see claim 3, *supra*) and having comfortable ease of insertion/removal and bypass leakage prevention for the user (see claim 2, *supra*).

Thus, inevitable and necessarily the smallest width dimension would be located in the center region in order to provide a structure wherein the largest width dimensions are located in the ends. Applying the teachings of Schoelling, uniform dimensions along the length of the tampon cause uniform expansion along the length resulting in the conventional uniform cylindrical shape of conventional tampons without the desired expandability at the ends benefits. Wider dimensions at the center cause expansion at the center resulting in a spherical shape without the desired benefits of fluid velocity/absorption along the length of the tampon.

In view of the teachings of Schoelling, to form the recessed portions of Wada having smallest width dimension located in the center region as an inevitable and necessary corollary to largest width dimensions located in the end regions as taught by Schoelling, would have been obvious to one having ordinary skill in the art at the time the invention was made in order to form a tampon having fluid velocity along the length of the tampon and controlled expandability at the ends of the tampon thereby providing a cleaner and comfortable tampon for the user.

**Claim 5:** Wada discloses the tampon having a plurality of recessed portions. wada does not disclose wherein the width dimension varies continuously as measured along the length dimension. As seen in Figure 1, Schoelling teaches the width dimension varying continuously as measured along the length dimension. In particular, Schoelling, at page 1, [0017], line 2, teaches the width dimension uniformly increases over the length of the tampon for optimal diversification of the absorptive velocity and capacity over the length of the tampon (p. 1, [0015], ll. 9-10) and thus discloses a desire for such. Discovering the optimum value of absorptive velocity over the length of the tampon in the known process of varying the width dimension and surface area to attain the desired resulting absorptive capacity is a result effective variable and it has been held that discovery of a result effective variable in a known process involves only routine skill in the art. *In re Boesch and Slaney*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, to form the recesses of Wada having continuously varying width dimension as taught by Schoelling would have been obvious to one having ordinary skill in the art at the time the invention was made, since Schoelling states at page 2, [0023] that such a modification allows the characteristics such as absorbency and expandability and the structure and shape of the

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tampon to be chosen in such a manner to avoid additional manufacturing costs while providing a comfortable tampon with reduced leakage for the user.

**Claim 6:** Wada discloses the tampon having a plurality of recessed portions. Wada does not disclose wherein the width dimension varies intermittently as measured along the length dimension. As seen in Figure 1, Schoelling teaches the width dimension varying intermittently as measured along the length dimension. Schoelling, at page 1, [0015], line 4 and at [0016] teaches non-uniform and various dimensions and at page 2, [0019] teaches different geometrical configurations varying intermittently in order to vary the size of the openings of the recessed portions in order to direct fluid flow and absorption velocity along the surface of the tampon and to control expandability at the ends of the tampon. Therefore, to form the recesses of Wada having intermittently varying width dimension as taught by Schoelling would have been obvious to one having ordinary skill in the art at the time the invention was made, since Schoelling states at page 2, [0023] that such a modification allows the characteristics such as absorbency and expandability and the structure and shape of the tampon to be chosen in such a manner to avoid additional manufacturing costs while providing a comfortable tampon with reduced leakage for the user.



With respect to the limitations of width dimensions, Applicant's specification, at page 6 lines 21-32 and page 7, lines 7-15 states dimensions of the recesses may be varied according to mutually exclusive alternate embodiments; however applicant has provided no criticality for the width dimensions. The specification contains no disclosure of either the critical nature of the claim limitations nor any unexpected results arising therefrom, and that as such the limitations were arbitrary and therefore obvious. Such unsupported limitations cannot be the basis for patentability, since where patentability is said to be based upon particular dimensions or another variable in the claim, the applicant must show that the chosen variables are critical. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ 2d 1934 (Fed. Cir. 1990). One having ordinary skill in the art would be able to determine the ideal dimensions for the particular recessed portions.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wada in view of Child et al (US 6,283,952).

**Claim 12:** Wada discloses the tampon having a plurality of recessed portions. Wada does not expressly disclose the withdrawal end having a finger indent. As seen in Figure 2, Child et al teach a finger indent. Child et al, at column 1, line 59-60 express the desire to provide a finger indent for the user to manually insert the digital tampon thereby providing ease of insertion. Therefore, to form a finger indent as taught by Child in the tampon of Wada in order to provide a digital tampon permitting the user ease of manual insertion of the tampon thereby providing a more comfortable tampon would have been obvious to one having ordinary skill in the art, since Child states at column 2, lines 34-36 that such a finger indent permits the user to apply a force necessary to insert the tampon.

***Response to Arguments***

***Drawings***

The drawings were received on 16 August 2005. These drawings are acceptable.

Applicant's arguments filed 16 August 2005 have been fully considered but they are not persuasive.

I. Applicant submits that Wada does not disclose a tampon having an outer surface comprising a plurality of recessed portions because the outer surface of the tampon is a liquid permeable layer covering the absorbent layer (26) and the outer surface of the tampon is essentially smooth except for fold lines created as part of the process of compressing the absorbent and the liquid permeable layer covering absorbent layer (26) thus the outer surface has no recessed portions and the instant claim 1 is allowable over Wada (remarks, p. 1, ¶ 1).

This argument is not persuasive because at p. 4 [0025] Wada discloses the embodiment where the liquid-permeable layer comprises the recessed portions:

“The absorbent layer 20 having the small recesses 3 thus formed is covered on its surface with the liquid-permeable layer 26 to provide the absorber 2.... Here in this embodiment, the small recesses 3 are formed exclusively in the absorbent layer 20 but may be formed by embossing the surface of the absorber 2 *after* the absorbent layer 20 was covered with the liquid-permeable layer 26.” (Emphasis added.)

Wada further discloses at p. 4 [0042]: (here, the liquid permeable layer is polyethylene terephthalate):

“An absorber was obtained by covering the fibrous web all over its surface with a spun bond nonwoven fabric made of polyethylene terephthalate.... Small recesses were formed in the surface of the absorber by clamping and compressing the absorber between the upper and lower surfaces thereof with needles.... After this, the absorber was compressed...”

It is therefore Examiner’s position that needling the outer surface of the absorber to form the recessed portions *after* the liquid permeable layer covers the surface of the absorber inevitably and necessarily results in needling and recessing the liquid permeable layer now forming the outer surface. Therefore, Wada discloses the tampon having the outer surface comprising a plurality of small recesses and therefore discloses the instant invention as claimed.

II. Applicant submits that the outer surface of Schoelling is a perforated cover, a perforation is a hole, and therefore there can be no recessed portion of the outer surface of the Schoelling tampon thus Schoelling does not teach or suggest a tampon having an outer surface comprising a plurality of recessed portions (remarks, p. 2, ¶ 2). This argument is not persuasive because Examiner is not relying on Schoelling for disclosing recessed portions, Examiner is relying on Schoelling for the teaching the processes of controlling absorbency and expandability of a tampon based on the structure of the tampon (Schoelling at [0003]) by selectively controlling fluid flow and absorption velocity of menses along the surface of the tampon by increasing or decreasing the surface area of the tampon ([0020], ll. 6-8; [0021, ll. 3-4) by choice of surface geometry [0019] as best depicted in Figures 1 and 4.

III. Applicant submits Child et al do not disclose the tampon outer surface recessed portions. This argument is not persuasive because Child et al teach the tampon (10) having indentations (21) on the outer surface of tampon and indentation (23) in the withdrawal end.

The dictionary definition of “indentation” is, *inter alia*, “a recess in a surface” (Merriam-Webster’s Tenth Edition). Therefore, Child et al teach a tampon having recessed portions on the outer surface and additionally, Child et al teach the withdrawal end comprising the finger indent (col. 3, l. 30) as claimed.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginger T. Chapman whose telephone number is (571) 272-4934. The examiner can normally be reached on Monday through Friday 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Tatyana Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ginger Chapman  
Examiner, Art Unit 3761  
10/21/05

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